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(21) International Application Number: PCT/US99/28529 (22) International Filing Date: 2 December 1999 (02.12.99) (30) Priority Data: 09/205,658 3 December 1998 (03.12.98) US (71) Applicant: THE GENERAL HOSPITAL CORPORATION [US/US]; 55 Fruit Street, Boston, MA 02114 (US). (72) Inventors: RUVKUN, Gary; 120 Herrick Road, Newton, MA 02138 (US). OGG, Scott; 19 Phillips Lane, Newton, MA 02159 (US). (74) Agent: ELBING, Karen, L.; Clark & Elbing L.L.P., 176 Federal Street, Boston, MA 02110-2214 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR IMPAIRED GLUCOSE TOLERANCE CONDITIONS		
(57) Abstract		
Disclosed herein are novel genes and methods for the screening of therapeutics useful for treating impaired glucose tolerance conditions, as well as diagnostics and therapeutic compositions for identifying or treating such conditions.		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/28529

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/00; C12N 15/00; C12N 15/63, 15/85, 15/86; A61K 38/00

US CL : 800/4, 21; 435/69.1, 320.1, 325; 514/2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 800/4, 21; 435/69.1, 320.1, 325; 514/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KIMURA, K.D. et al. daf-2, an Insulin Receptor-Like Gene That Regulates Longevity and Diapause in <i>Caenorhabditis elegans</i> . Science. 15 August 1997, Vol. 277, pages 942-946, see entire document.	1-24
A	REN, P. et al. Control of <i>C. elegans</i> Larval Development by Neuronal Expression of a TGF-Beth Homolog. Science. 22 November 1996, Vol. 274, pages 1389-1391, see entire document.	1-24
A,P	GIL, E.B. et al. Regulation of the insulin-like developmental pathway of <i>Caenorhabditis elegans</i> by a homolog of PTEN tumor suppressor gene. Proc. Natl. Sci. USA. March 1999, Vol. 96, pages 2925-2930, see entire document.	1-24

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/28529

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	OGG, S. et al. The Fork head transcription factor DAF-16 transduces insulin-like metabolic and longevity in <i>C. elegans</i> . <i>Nature</i> . 30 October 1997, Vol. 389, pages 994-999, see entire document.	1-24
A	LARSEN, P.L. et al. Genes that Regulate Both Development and Longevity in <i>Caenorhabditis elegans</i> . <i>Genetics</i> . April 1995, Vol. 139, pages 1567-1583, see entire document.	1-24
A	LONNQVIST, F. et al. Overexpression of obese (<i>ob</i>) gene in adipose tissue of human obese subjects. <i>Nature Medicine</i> . September 1995, Vol. 1, No. 9, pages 950-953, see entire document.	1-24